PERCEIVED RISK INFLUENCE ON ONLINE PURCHASE ADOPTION: MODERATING EFFECT OF CONSUMER TRUST AND CONSUMER PROTECTION

A

SYNOPSIS

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1.0 Introduction

The expansion of electronic commerce (e-commerce) has transformed the way we shop and do business, with more and more people turning to online platforms to purchase goods and services. However, the growth of e-commerce has also raised concerns about perceived risk, trust, and consumer protection. Perceived risk refers to the level of uncertainty or risk that consumers perceive when making a purchase online. Factors that can increase perceived risk include concerns about the security of personal and financial information, concerns about the quality aur authenticity of the goods or services being purchased, and concerns about the ability to return or exchange goods if necessary. Trust represents refers to the confidence that consumers have in the legitimacy and reliability of e-commerce sites and can be influenced by factors such as the reputation of the retailers, the use of secure payment systems, and the transparency of privacy policies (Saloni, 2017). Consumer protection refers to the measures in place to ensure that consumers are treated fairly and that they receive the goods or services they paid for. This can include consumer protection laws and regulations, as well as third-party dispute resolution services such as mediation or arbitration (Adgulwar, 2021). This study will provide valuable insights into the importance of perceived risk, trust and consumer protection in the expansion of e-commerce and will help to ensure a sustainable and trustworthy online marketplace for consumers and businesses alike.

1.1 Overview of E-commerce

E-commerce (Electronic commerce) means buying & selling goods and services over the Internet such as dealing in raw materials, products, payments, delivery, or any other kinds of transactions between retailers, wholesalers, and customers (consumers). It is a virtual platform directly connecting buyers and sellers on the Internet (Shaik & Poojasree, 2020).

Many companies use e-commerce to reach out to customers of the global range and increase their sales. After, the discovery of e-commerce, it is very helpful for retailers evolved to make products easier to search for and purchase through online marketplaces. Customers now have access to a wide range of products from the comfort and security of their homes thanks to e-commerce, which also enables businesses to impose contact limitations and other restrictions.

E-commerce has been used in many different business sectors. Business-to-Business (B2B) and

business-to-consumer (B2C) are the two main contexts in which it is used (B2C) (Gupta, 2014). (Shaik & Poojasree, 2020).

1.2. Risk in Online Purchase Adoption

1.2.1 Security Risk

One of the key factors preventing a client or business from engaging in online commerce is security. On its internal networks, the e-commerce industry is gradually addressing security concerns. System and network security are governed by rules. Consumer education regarding security risks is still in its infancy. Consumer education will enhance the architecture of e-commerce security.

Four essential criteria must be met by any e-commerce system, and they are as follows: -

1. Privacy: Information transferred between the two parties must be protected from third parties that arenot allowed.
2. Integrity - The information that the two parties exchanged must be accurate.
3. Authentication: Both the sender and the recipient verify the other's identities.
4. Non-repudiation - Evidence that the transmitted information was received is necessary. (Saloni, 2017).

Cybercrime is a security risk that affects e-commerce. Due to the tremendous advancements in information technology during the past century, the idea of crime has undergone a significant shift. Smart criminals have turned cybercrime into a thriving underground industry, buying and selling valuable financial data obtained from millions of unwary internet users each year on an online black market. Because they are so adept at breaking into thousands of computers every day, cybercriminals may make a billion dollars off their crimes. Malicious software, or malware, is the main source of cyberattacks **(**Sireesha et al, 2017). A victim system could be used by several hackers to place fraudulent orders without the e-commerce server being aware of it. Password security, encrypted client-server connection, and public-private key encryption techniques are rendered useless due to the Trojan horse program's ability to allow the hacker access to all clear-text data before it is encrypted. Phishing attacks are among the most frequent security lapses that harm internet shoppers. According to the name, clickbait is used to entice a person into disclosing their sensitive passwords and credit card information. Phishing is a practice when fraudsters send emails purporting to be from well-known companies to get

a person's personal information (Aseri, 2021).

1.2.2. Privacy Risk

It might be difficult to convey privacy's various components because the term has so many diverse definitions. The "right to be left alone" and having control over how personal information is disclosed and accessed are both definitions of privacy. The ability of an individual to decide what information should be disclosed and what should not is another definition of privacy (Neama et al, 2016).

Privacy issues First, they worry about the potential of secondary use, or the reuse of their personal information for unrelated reasons without their authorization, such as sharing with parties that were not involved in the transaction in which the consumer related his or her personal information. Second, due to security lapses or a lack of internal controls, consumers are worried about unauthorized access to personal data. (Gupta & Dubey, 2016). Due to the difficulties in enforcing privacy laws and monitoring them, privacy is a significant problem in electronic commerce. E-commerce gathers a lot of information about consumer preferences, purchasing trends, and frequently searched items. Many e-commerce companies use their customers' personal information for absurd purposes. According to a survey, 92% of respondents said that even though e-commerce companies are legally required to keep personal information secret, in practice they reveal personal information (Muneer et al, 2018).

E-commerce has not been able to fulfil its full potential due to the rise in media warnings about security and privacy breaches including identity theft and financial fraud, as well as the raised awareness of online customers about the risks of conducting transactions online. Many consumers avoid making purchases online due to a lack of confidence in or concern over their personal information. (M & Chahar, 2013). However, in the context of e-space, privacy is challenging since it embodies complex aspects of social, economic, and cultural issues in addition to civil and political rights. With the e-presence of people on numerous online platforms that aim to develop and monitor behavioural attributes of user's life with the help of e-working on multiple platforms, said privacy is likely to be violated, which is a concern for citizens of countries with normality attained governmental setup (unlike countries dealing with civil unrest and unstable or failed governments). One of the most important factors that effectively foster consumer and e-commerce portal trust and lead to a confident browsing and transactional attitude is the protection of user privacy for legitimate access to the platforms.

Traditional businesses are now utilizing their websites for e-commerce purposes. (Pandit, 2020).

1.2.3 Financial Risk

The level of uncertainty that a consumer is willing to endure when engaging in a financial transaction is known as financial risk. The majority of customer purchases in the e-commerce ecosystem have so far been made of items with low financial risk, like books, music, apparel, and travel. These items are less expensive, well-understood, and typically require consumers to look for less information, which results in lower levels of perceived financial risk. (Keating et al, 2008). When it comes to preferred payment methods and the readiness to provide personal and payment information while purchasing online, the issue of e-commerce is intimately tied to perceived financial risk. This demonstrates the standing of the e-commerce industry and the devotion of internet users. Financial risk gauges a consumer's worry about suffering a monetary loss when doing online purchases. It has to do with how vulnerable the consumer feels to financial loss. By 2025, Generation Y and Generation Z consumers would account for more than 40% of all consumers. (Fedroko, 2021). This risk relates to the potential for financial loss when choosing an alternate method of payment. Financial loss occurs when a customer is unable to seek a refund, when necessary, to back and undo a transaction, or stop paying after makinga mistake. Credit card fraud and unauthorized that results in financial loss are also included. These are some of the most typical risk categories that could be connected to online marketing and sales transactions. (Salam et al 2003)

1.3 Consumer Trust in E-commerce

The focus was on consumer trust in electronic commerce, not the trust between the parties involved in e-commerce transactions. They conflated the terms trust, authorisation, and authentication due to the lack of agreement over the trust (Katsikas, 2005).

Trust is a key factor in consumer behaviour and, consequently, in the success of e-commerce. develops the idea of trust leading to a causal relationship: trust is what drives customer behaviour assert that internet shops may boost consumer trust, which would encourage more potential customers to make purchases online. In general, people consider trust to be a crucial component of a successful relationship. Trust can be defined as the readiness to rely on a trading partner in whom one has faith. trust is defined as perceived confidence in the dependability and integrity of the exchange partner.

(Corbitt et al, 2003).

Additionally, this idea has a long history that has seen it transition from limited trust among family and friends to strangers on peer-to-peer networks. This idea has been applied specifically to electronic commerce (e-commerce), which is seen as a crucial element for success in online commerce because it is thought to be a crucial component separating purchasers from non-buyers. Similar studies revealed that few consumers, especially when their privacy and security were at risk, could put their trust in these sites. Since e-commerce has become a more powerful commercial and economic force in recent years, In the past 20 years. the idea of trust has unavoidably drawn a lot of attention. It caught scientists' interest, leading them to explore it using some models from other academic fields. (Soleimani, 2021). Issues of trust and danger are frequently cited by consumers and, to a greater and greater extent, by businesses as major obstacles to electronic commerce. Threats of merchant opportunism, in which goods or services are never delivered or, if they are, are of lower quality than promised; the risk of misuse of personal information (privacy violations), either intentionally or unintentionally, by merchants or by third parties seeking this information to engage in credit card fraud; and the risk of goods or services being delivered but of lower quality than promised. Once trust and risk issues have been resolved and technical hurdles have been removed, remote. Under the current tax system, commerce will start to have actual tax ramifications for states. If using remote commerce is associated with the opportunity cost, as we claim below, some states will be more severely damaged than others in terms of time and consequently income. (Clay & Strauss, 2000).

1.4 Consumer Protection in E-commerce

An act to establish authorities for the prompt and efficient administration and resolution of consumer disputes, as well as things related to or incidental thereto, to protect the interests of consumers (Adgulwar, 2021).

Consumer protection is a pressing concern in global e-commerce. Through cost reduction, competition, and improved manufacturing process management, e-commerce boosts productivity and expands the range of options. Customers now have access to a wide range of items from the comfort and security of their homes thanks to e-commerce, which also enables businesses to impose contact limitations and other restrictions. Legislation all across the globe has long acknowledged the global area, including

India, making the defence of basic consumer rights important. To defend consumer interests by United Nations consumer protection recommendations, India created the Consumer Protection Act in 1986. Since they interact with anonymous merchants and suppliers, online customers are more exposed to cyberspace than in-store buyers. E-commerce worries include data security and privacy issues, product quality, inconsistent deliveries, limited options for replacements, where to file complaints, and confusing terms and conditions. Consumer discomfort and distrust have developed as a result of the insufficient provisions of the consumer protection act 1986 and other legislation of a similar kind. As a result, the consumer protection act of 2019 will take the place of the consumer protection act of 1986 on July 20, 2022. (Chawla & Kumar, 2021). The Act includes provisions for the establishment of District forums, State Consumer Dispute Redressal Commissions, and the National Consumer Dispute Redressal Commission as mechanisms for the resolution of consumer disputes at various levels (Kachare et al, 2012). These organizations aid consumers in obtaining compensation for unfair or onerous business practices, deceptive consumer exploitation, and other similar concerns involving the products or services they use. The process is laid out so that customers have a fair chance to be heard and to express their concerns about their interests (H, 2022). The concept of consumer protection is older than human civilizations. Protecting the interests of the customers is one of the company's main concerns. Mahatma Gandhi asserted that the customer is the ultimate purpose of the business and offers an opportunity for businesspeople to serve him. We might even claim that the customer is compared to God in some Indian beliefs. However, marketers, salespeople, and dealers are taking advantage of consumers for their financial gain by using dishonest and unethical business practices (Singh and Grewal, 2013).

1.5. Consumer Rights.

1.5.1 Consumer

Anyone who buys things for consideration that has been paid, promised, partly paid, partially promised, or under any system of delayed payment is referred to as a consumer. Anyone who uses those goods for consideration that have been paid, promised, partially paid, or partially promised, or under any system of deferred payment, when the user is authorized by the purchaser, is also included in this definition. However, this definition does not apply to anyone who purchases those goods to resell them or engage

in any other commercial activity (Solanki**,** 2019). The corporate system is dependent on the consumers. The people who purchase and use the products and services that businesses offer are known as consumers. The growth of the business world depends on the protection of consumer rights. Physical commerce was replaced by E-Commerce, also known as online commerce, as a result of technological advancements (Adulgwar, 2021).

1.5.2 Consumer Rights

The larger idea of consumerism includes consumer rights. Consumer protection and consumer movement are other names for consumerism. In the majority of the world, it is seen as a significant political force. It alludes to initiatives taken by different actors to defend fundamental consumer rights. Consumerism is a marketing term that describes efforts taken by consumers, their representatives, businesses, governments, and other organized groups to advance the rights and interests of consumers (Makanyeza et al, 2021).

The right to information: The right to get the facts necessary to make an educated choice andthe protection from false or misleading advertising and labelling.

The right to choose - being able to choose from a selection of goods and services that are all available at reasonable prices and of excellent quality.

The right to be heard: To have consumer interests taken into consideration when goods andservices are developed and when governmental policies are formulated and implemented.

The right to seek redress: Getting a fair settlement to legal complaints, such as compensation for deceptive statements made or subpar products or services.

The right to consumer education: To be aware of fundamental consumer rights and obligations and how to exercise them, as well as to possess the knowledge and skills essential to makingknowledgeable judgments about products and services (Pandey, 2020).

Furthermore, prevailing research gaps indicated that there are many studies conducted in the past on the issues and problems related to expansion growth and online purchase adoption in international scenarios. However, very few studies are available on perceived risk and online purchase adoption and online buying behaviour in general and particularly in the context of India.

Previous research has mainly examined the impact of perceived risk on online buying behaviour.

However, these studies frequently ignore the dynamic nature of perceived risk and fail to take into account how elements like consumer protection and confidence in consumers might affect this relationship. Due to the understudied complex interactions between perceived risk, customer trust, and consumer protection, this leaves a huge study gap.

The potential for the study to inform company strategy, influence legislative choices, empower consumers, and contribute to the ongoing discussion about consumer behaviour in the digital era justifies its necessity. The study aims to widen opportunities for a safer, more secure, and more assured online shopping experience by addressing these criteria.

This study's main goal is to close the aforementioned research gap by examining the moderating effects of consumer protection and trust on the link between perceived risk and the adoption of online purchases. The study aims to better understand the intricate network of factors that influence consumers' choices when it comes to internet buying.

2.0 Literature review

The literature on the subject is briefly summarised in this section. Present study content and a synthesized literature review make up the review. This study material was further divided into sections on e-commerce, risk, and each of those dimensions, as well as trust and consumer protection**.**

2.1 Security Risk

M and Chahar, (2013). The researcher presented an overview of e-commerce security in this paper. Recognize the steps for placing an order online, e-commerce security goals, various security concerns with online shopping, and safe online shopping rules. In this study, the researcher covered the topics of e-commerce security concerns, security precautions, the digital e-commerce lifecycle, online purchasing, security threats, and best practices for risk-free and secure online shopping on shopping portals.

Masoud, (2013). The study found that online shopping behaviour is negatively impacted by financial risk, product risk, delivery risk, and information security risk. The approach makes use of Amos 18 and SPSS 17. There are significant managerial ramifications of the study. It informs marketers of the significance of consumers' perceptions of risk so they can adopt appropriate risk-reduction techniques in the context of online buying.

Gupta and Dubey, (2016). The work in this paper is focusing on e-commerce sites and users must not only evaluate security flaws and potential technological fixes, but also evaluate, assess, and manage the risks involved. As a result, the first security priority from the viewpoint of an e-commerce merchant should be to keep the web servers' archives of recent orders behind the firewall rather than on the front-end web servers. Additionally, all inessential services and programs (such as email and FTP) should be disabled or removed from sensitive servers to maintain their high level of specialization. Only when consumers feel trustworthy can the market be trusted.

Gurung and Raja, (2016). The purpose of the study is to look at the connections between privacy, security, and trust issues, as well as risk perception in e-commerce. The survey's findings support the hypothesis. The fact that this study included student participants is a disadvantage. This study was conducted in an educational setting, which limits its generalizability to the general consumer population.

Mahajan, (2018). This paper's research on e-commerce and security risk. In the analysis of threat classification and management strategies, a dynamic hazard administration framework is offered. The system will be used by businesses engaged in online commerce to help with their security.

2.2 Privacy Risk

Chatterjee, (2015). This paper focuses on the security and privacy concerns in online transactions. Consumers will also go over the various precautions that should be taken before engaging in online shopping, as well as the significance of security and privacy in ECommerce. Following our discussion, we will offer recommendations on how to reduce risks and vulnerabilities when a user is engaged in an E-Commerce transaction.

Kaur, (2015). Said that consumers need to be protected during a period of significant change, but the law is having trouble keeping up. There is no denying that online consumers have unique needs; for instance, the issue of privacy poses a greater risk in cyberspace and needs to be addressed carefully. The problems that consumers face when engaging in transactions online are not very different from those faced by consumers when engaging in transactions offline.

Muneer et al, (2018). The document makes an effort to provide a summary of privacy-related problems and potential fixes. Explain the procedures to follow before shopping online and explain the

significance of privacy and security. A set of recommendations is provided to reduce risks and vulnerabilities.

Alemany et al, (2019). Said that teenagers are seen to be one of the groups most susceptible to privacy hazards due to their low levels of self-control and vulnerability to peer pressure. The majority of privacy strategies put forth in the literature attempt to address privacy in social networks to make privacy settings easier. The researcher conducted this study with 42 youngsters to investigate the causes. The suggested mechanisms were incorporated into the PESEDIA social network.

2.3 Financial Risk

Iyer and Moorthy, (2015). Said that fraud risk is substantial (up to 0.9%). Through risk-scoring models, this fraud can be stopped before the actual transaction phase. Measures like withholding or reserving funds from the seller or requesting further documentation from the seller to release the funds can be taken during the post-transaction phase. Numerous variations exist based on various geographical regions, various seller classes, or various holding methods of these measures. In this paper, the researcher has covered the many transaction kinds, the various financial risk measurements, and how BPMN2 may be utilized to describe the same while also forming a powerful executable component, shortening development time. It's also conceivable that these models may be traded and standardized within the sector.

Nawi et al, (2019). This study used an adjusted stimulus-organism-response (SOR) model to assess the impact of a few antecedents and risk factors on consumers' online shopping behaviour. To gather information from 330 chosen respondents, this study used a cross-sectional design. The results showed that online purchasing behaviour was significantly influenced by customer age as well as perceived after-sales risk, financial risk, psychological risk, and social risk. This study not only adds to the body of knowledge but also has various important applications. According to the findings, it is advised that to lower the various sorts of perceived dangers related to online transactions, the government and online businesses should concentrate on Generation Y, who are believed to be more tech-savvy, through regulations and programs.

Yumin, (2020). This article examines financial risk management using big data with e-commerce enterprises as the research subject. It primarily focuses on how e-commerce businesses manage security

effectively, how to set up and enhance corporate financial risk management systems, and how to enhance corporate financial risk identification, management, and control capabilities to ensure the company's healthy and sustainable growth. Strengthening research on the financial risk management of e-commerce enterprises is now a top issue for all spheres of society in the context of the Internet. This is very important for reducing business financial risks, enhancing financial management skills, and increasing overall competitiveness.

2.4 Awareness

Kachare et al, (2012). The mean awareness score rises across all faculties as experience and age grow. Comparatively higher than the introduction to CPA and professional negligence was the mean awareness score for the makeup of the consumer's forum, procedural aspect, and power of the consumer court. It might be said that junior doctors are generally aware of the Consumer Protection Act. It's encouraging that 82.43% of doctors had heard of medical indemnity insurance. Data were collected by questionnaires out of a sample size of 30.

Arora et al, (2014). Said that consumer awareness of an individual has advantages for improved critical thinking, better life skills, and higher self-confidence. In our nation, there is a functioning legal, administrative, and consumer redressal system that allows consumers who have been taken advantage of by retailers or service providers to complain to a consumer court and demand justice. This study sought to gauge teenagers' degree of consumer awareness as well as their opinions on the market as it exists today. A standardized questionnaire and an interview schedule were used to gather the data. For the survey, a total of 120 respondents were taken into the study. Descriptive statistics and the chi-square test were used to analyse the data.

Chaudhary, (2017). This study attempts to raise awareness while also learning how well-informed students are on the subject. Each of us is equally protected by the law from exploitation and dishonest business practices by manufacturers and traders. To create a nation of responsible citizens who may lead a secure life, free from the bad intentions of traders, this paper proposes the inclusion of the Consumer Protection Act in the Higher Secondary/ Degree syllabus of all streams of the State Board/ University. After all, a smart consumer will always make safe choices.

Sharma and Kurien, (2017). Our nation has a functioning legal, administrative, and consumer

redressal system that allows consumers who have been taken advantage of by retailers or service providers to complain to a consumer court and demand justice. A standardized questionnaire and an interview schedule were used to gather the data. The study also shows that teenage boys are more aware of their rights as consumers than teenage girls.

Solanki, (2019). Said that consumer rights knowledge varies when it comes to the right to consumer education, but it is the same throughout all of Gujarat's districts when it comes to the rights to information, safety, choice, being heard, and seeking redress. There is no variation in consumer rights awareness among people of different ages, genders, family incomes, educational levels, or occupations. Malpractices involving product quality, product mismatch, and product delivery affected online shoppers.

Makanyeza et al, (2021). This study investigates the relationship between consumer attitudes and intentions, the influence of attitudes on intentions, and the moderating effects of gender, age, and education on the relationship between consumer attitudes and intentions. According to the findings, customer attitude positively affects consumer intention while consumer rights awareness positively affects both consumer attitude and intention. Further findings show that education, but not gender or age, moderates the impact of consumer rights awareness on both consumer attitude and intention. In addition to testing the moderating impacts of demographic parameters on these connections, the study is one of the first to assess the impact of consumer rights awareness on both consumer attitude and behavioural intention.

2.5 Trust

Bolton and Katok, (2004). In this study, the researcher contrasts trading in a market with online feedback (as used by many Internet markets) to trading without feedback as well as trading in a market where the same individuals engage in repeated interactions (partners market). Even though the feedback mechanism significantly increases transaction efficiency, it also displays a type of public goods dilemma since, unlike in the partner market, the advantages of trust and trustworthy behaviour benefit the entire community and are not fully internalized.

Velentzas, et al (2012). Ensuring that all claims made by EU-based traders are truthful, accurate, and supported, protects consumers from being deceived or subjected to aggressive marketing and allows

them to make wise decisions. The objective of the Directive is to safeguard, advance, and protect fair competition in the domain of business practices. National policy, style, and enforcement methods are characterized by a variety of obstacles, especially when one examines the legal implications of full harmonization in a particular sector.

Bhatti et al, (2018). This study makes the concrete suggestion that trust must be established to improve online buying and reduce dangers. This study's key contribution is that it takes into account trust as a moderating factor between risks and online buying behaviour.

Chawla and Kumar, (2021). The important findings include that a secure and reliable system is necessary for e-business platforms to operate successfully, that cash on delivery is the preferred payment method for online purchases, and that accurate information on websites and effective customer support services foster customers' trust. The findings add to the body of knowledge on e-commerce and protecting consumer rights by outlining the crucial elements that influence customer loyalty and trust and by providing an insightful viewpoint on e-consumer protection in the Indian context

2.6 Consumer Protection

Yakoob, (1998). The study's methodology is an empirical field survey. Its goal is to evaluate the numerous effects that the COPRA has had on the different facets of the consumer movement. Consumer protection seems to have had a significant impact on the attitudes and behavioural facets of conservative Indian society. Therefore, the study's analysis of changes in consumer activism, consumer organisation activism, corporate community attitudes, and the operational effectiveness of redress agencies is proposed. Both primary and secondary sources of data were used to compile the results.

Singh and Grewal, (2013). This paper says that after a decade of economic changes, consumption now dominates the Indian market. It is gradually changing from a market that is dominated by sellers to one where purchasers exercise their options, depending on their level of awareness. The current paper makes an effort to analyse, critique, and synthesize "consumer protection in India. The focus of this study is to determine whether the nation's current legal framework is adequate to handle consumer-related business transactions in the modern world.

Minhas, (2019). Explain that the Consumer Court is a special-purpose court that mostly handles issues involving consumer disputes and grievances in India. These courts were established by the government

to safeguard the rights of consumers. Its primary purpose is to uphold the vendors' obligation to treat customers fairly. If customers feel that a seller has harassed or taken advantage of them, they can register a complaint. Only if the consumers/customers present evidence of exploitation, such as bills or other papers, can the court rule in their favour. It would be exceedingly difficult for a consumer to win or even initiate a case if they lacked the correct paperwork needed to do so.

Shaik and Poojasree, (2020). This paper extensively addresses the legal context and compliance with E-Commerce in the worldwide market that has gone digital. This study goes on to discuss the long-arm statutes and jurisdictional aspects of e-commerce conflicts and problems.

Pandit, (2020). The focus of this article is on the current legal frameworks being used by various nations to control international trade. The study is intended to call attention to the legal framework for e-commerce in India, as well as the main problems with the current e-commerce laws in India and what steps can be taken to close the regulatory gap.

Adgulwar, (2021). This study focuses on the idea of consumer protection while keeping in mind both the laws that were in place before the advent of technology and the most recent amendments to the act that takes into account the change and transformation in the field of consumer law as a result of the emergence of e-commerce trends.

Balachandran and Arunima, (2021). Said that the Consumer Protection Act of 2019 offers a real solution to the challenges surrounding the numerous changes in the market over the past three decades, particularly the rise of digital consumption.

Chawla and Kumar, (2021). A thorough analysis of the two recently passed legislation, the Consumer Protection Act of 2019 and the Consumer Protection (E-commerce) Rules of 2020, as well as a review of the relevant literature, support the analysis of 290 online consumers in addressing the study's objectives.

2.7 E-commerce

Kaur, (2015). E-commerce has altered how retail, services, and other aspects of our economy operate. For many years to come, it will undoubtedly continue to have an impact on how businesses market and sell their goods as well as how consumers decide what to buy. However, the growth of electronic commerce brings with it several legal and consumer difficulties. New technology and the deregulation

of the financial industry are combined in India.

A, (2019). This paper is focusing on perceived risk with specific implementation for e-commerce acceptance. The methods of this paper include descriptive methods and relevant data were collected with questionnaires from Southwest Nigeria with a sample size of 666.

Mahmoud, (2019). Explain that e-commerce is currently being used by the majority of businesses as a means of boosting the profitability of their products and services. The internet has become a crucial resource for consumers to find goods and services, as well as a practical way to make payments. For an internet business to succeed, security is crucial. To identify and debate numerous privacy and security issues in e-commerce, the research aims to do the following. The study discovered a variety of security flaws that could jeopardize the security of e-commerce activities. The survey also discovered that there are many strategies that companies can use to combat the growing risk to the security of their online stores.

Adgulwar, (2021). The lack of a proper restitution mechanism for the e-commerce industry, particularly in the online retail sector, is another major problem for consumers. When entering the e-commerce industry, customers should exercise greater caution and adhere to the caveat emptor maxim for increased security.

Salamat & Elian, (2021). Explain that nowadays, well-known internet websites are used to electronically carry out e-commerce transactions (Amazon, Alibaba, eBay, and others). Therefore, the purpose of this study is to identify the risks restricting e-commerce in Jordan. Research gap on the factors that determine the risks and threats that restrict online buying and e-commerce in emerging nations, this study adds to the body of knowledge. Data collection using the psychometric approach uses a sample size of 220.

3.0 Research Gap

The researcher finds the following research gaps based on the literature reviewed above, which concern the impact of perceived risk on the adoption of online purchases, specifically taking into account the the moderating impact of consumer protection and consumer trust. Although there has been a study on perceived risk and consumers' adoption of online purchases, there appears to be a void in the literature discussing the interaction between perceived risk, customer trust, and consumer protection and them

combined influence.

- An exhaustive and extensive review of the literature has been carried out to identify the numerous research gaps that are currently accessible in the existing research studies. The amount of literature analysed in this study, reveals that there is a significant knowledge gap regarding the impact of security, privacy and financial issues on consumer adoption of online purchases.
- The researcher aimed to partially narrow down that existing gap in research by analysing how perceived risk affects customer adoption in the Indian context. However, to the best knowledge, we could not find relevant research which emphasised the influence of Perceived risk on online purchase adoption.
- The proposed study shall focus on addressing the issue of identifying problems and factors related to online purchase adoption and the moderating effect of consumer trust and consumer protection on online purchase adoption.
- The earlier researchers did not address the issues of e-commerce awareness and trust in this work. Although every effort has been made to include respondents from different socioeconomic backgrounds who engage in online shopping, the sample may still not accurately reflect the population under study.
- Earlier research looked at how trust, affected e-commerce. Trustworthy, which is defined as being taken into account along with all customer motivations in systems like e-commerce to make them more enjoyable and motivating.
- Trust is a key predictor of consumers' acceptance of technology, Internet usage, and an evaluative aspect of online browsing. To examine their moderating impact on the relationship between risk and online purchase adoption, this study includes trust and consumer protection. A higher perception of satisfaction from the protection of a new technology may result in less anxiety, fear, or concern, which would reduce risk.
- To the best of our knowledge, however, some studies discuss the role of trust and consumer protection incentives from the standpoint of e-commerce. Therefore, this might have influenced the study.

4. Research Questions

Based on the above research, gaps in the following research questions are to be addressed in the proposed study

- What are the factors influencing the most online purchase adoption?
- How does consumer perception of risk impact online purchase adoption?
- How do consumer protection and trust-building measures affect online purchase adoption?
- What are the future trends and challenges for building trust and consumer protection in the adoption of online purchases?

5. Statement of the Problems

'Up to what extent the Consumer trust, consumer protection, and perceived risk can have an impact on their online purchases'?

6. Need of the study

Personal and financial information are the targets of online fraudsters. Scammers target clients that purchase, sell, or trade online, which causes problems for online traders. International scams are on the rise, according to the e-consumer gov's report on online cross-border fraud complaints. In total, there were 33,968 reported instances of cross-border fraud in 2020 (until June 30), resulting in a reported loss of US$91.95 million, contrasted to 40,432 cases in 2015 that resulted in a loss of US$151.3 million and 14,797 cases with a loss of US$40.83 million in 2010. These complaints included concerns with refunds, misrepresented goods, missing goods, and fraud concerning internet purchases. Based on consumer and corporate locations, the United States scored in the first position among the ten nations where customers reported online fraud. India ranked fifth for enterprise location-based reporting while ranking third for consumer location-based reports of online fraud, only behind France. Along with the USA and India, there were several customer complaints throughout Poland, Australia, the UK, Canada, Turkey, Spain, and Mexico. Most complaints were filed about businesses in China, the United Kingdom, France, Hong Kong, Spain, Canada, Poland, and Turkey (Chawla & Kumar, 2021). This study supports the protection of rural consumers by policymakers. The primary security and privacy concerns, the suitability of web vendors for e-consumers transactions, and the efficiency of security techniques and applications in protecting the confidentiality, integrity, and privacy of e-commerce

transactions are expected to be identified in this study.

Online Fraud, hacking, phishing, and other illicit actions resembling cyber warfare are becoming more prevalent as e-commerce trends increase. Many laws in various nations have periodically come into effect to stop this rising threat and tackle the issue from the beginning. To address these crimes, we need solutions that are both efficient and well thought out. It needs to put forth more effort to maintain a strong and practical data protection law. The scope of e-commerce in the future is increasingly clear thanks to digitization.

- In addition, despite the researchers' exhaustive search, they were unable to locate much literature on adoption and its numerous components in the Indian setting. The examination of the literature demonstrates that all of these studies were carried out outside of India and that they all gave great importance to the intention to use. The goal of this study is for the researchers to pinpoint several tactics for favourably affecting online consumers' impressions in the context of India.
- Studies on the consequences of consumer risk in e-commerce abound. However, a fewresearchers on e-commerce in India have been conducted. This study aims to determine how consumer perceptions of risk impact the uptake of e-commerce in the Indian market. As a result, they will be better able to pinpoint the risk factors that have the most effects on consumer adoption and the variablesthat have the biggest effects on consumer decisions regarding e-commerce.

As a result, the new study aims to widen the conversation on what drives e-commerce by incorporating both trust and consumer protection viewpoints. This study examines the moderating effects of consumer protection and trusts to better understand the relationship between risk and e-commerce. This could be a role in the decision of e-commerce stakeholders, including businesses and consumers, to alter their marketing strategies and corporate directives to motivate consumers to engage in e-commerce. The study also seeks to assess the impact of demographic traits on consumer online purchase adoption and risk.

7.0 The objectives of the study

1. To identify factors of perceived risk influencing online purchase adoption.
2. To assess the impact of perceived risk on online purchase adoption.
3. To assess the moderating effect of consumer trust and consumer protection on online purchase

adoption.

4. To identify the future trends and challenges of online purchase adoption.

8.0 Conceptual Framework and Research Hypotheses

The conceptual framework depicted in 8.1 serves as the foundation for the study's hypotheses. The framework shows the connections between several aspects of perceived risk and the adoption of e-commerce. In the proposed study, the researcher will conduct the investigation using the recommended structure shown in the picture below. The moderators will be trust and consumer protection. The model will look at how different perceptions of risk affect customer acceptance of e-commerce.

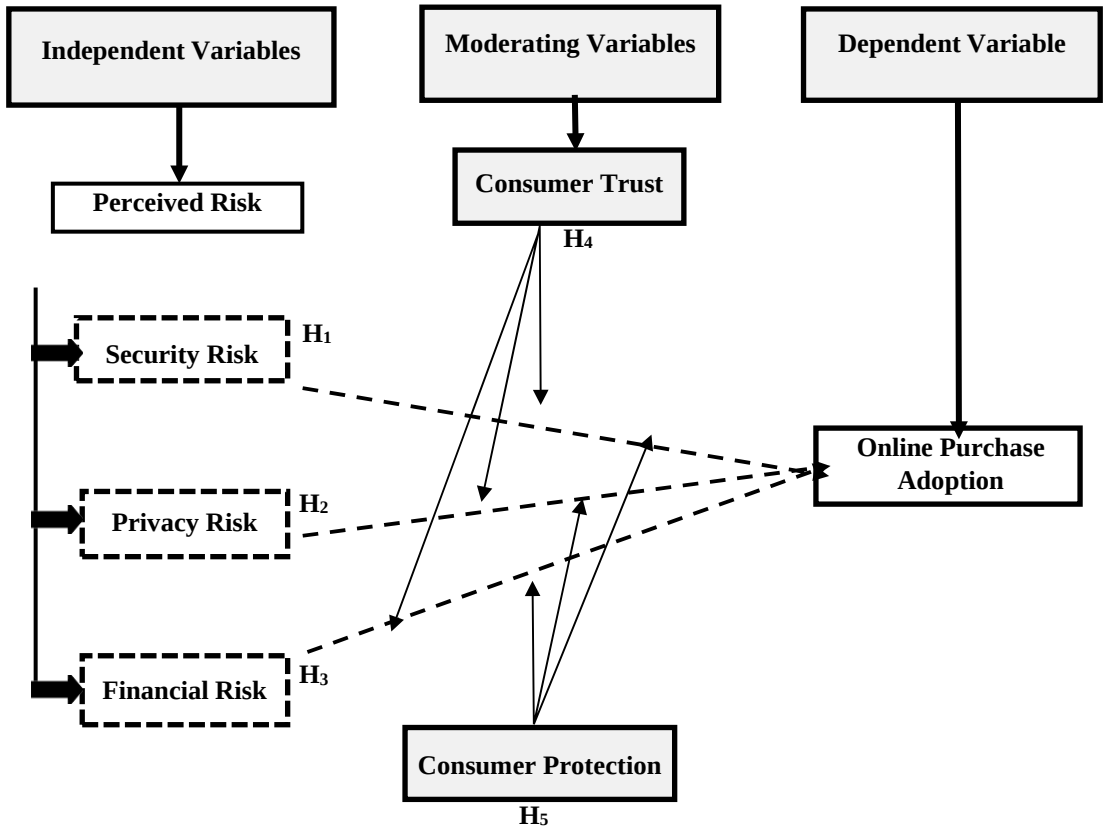

Figure 1. Conceptual Framework

8.0 Hypotheses

The study will be carried out to test the following hypotheses. The hypotheses for the present study are formed based on studies and relevant literature.

8.0.1. Security Risk on E-commerce

According to Mahajan. (2018) One of the main and ongoing issues that prevent customers and

organizations from engaging in e-commerce is security. (M. and Chahar, 2013) One of the main and persistent worries that prevent people and businesses from partaking in e-commerce is security.

H_0: There is no significant relationship between security risk and online purchase adoption.

8.1.2 Privacy Risk on E-commerce

In this article, we offer a basic theoretical framework that looks into the connection between privacy threats and e-commerce. Privacy issues are the main deterrents to using e-commerce services. (Neama et al, 2017). Significant amounts of customer data are necessary for businesses to compete in their markets, both conventionally and electronically. However, as customer data has been more accessible and stored electronically, consumers' privacy concerns have grown. (Marriott et al, 2017). The user must be confident in the E-Commerce site's security and privacy policies before beginning any online transactions. Users are advised to acquire a basic awareness of the privacy policies of the websites they frequently visit. (Chatterjee, 2015).

H_0: There is no significant relationship between privacy risk and online purchase adoption.

8.1.3 Financial Risk on E-commerce

Currently, most e-commerce businesses have systematically upgraded corporate finance management systems to meet the goal of cooperation across various departments, which may achieve effective coordination, in additively mitigating financial risks. The existence of spite is a requirement for the digitization of the management model to protectively allow e-commerce enterprises to carry out corporate financial risk management in the database. (Yumin, 2020). This paper focuses on the financial risks of e-commerce companies in the mobile Internet financial payment environment. On the other hand, e-commerce businesses must enhance their industry self-discipline and understanding of financial risks since they must deal with a variety of mobile Internet financial interfaces. (Luo, 2019).

H_0: There is no significant relationship between financial risk and online purchase adoption.

8.1.4. Trust drive plays a moderating influence in the relationship between consumer perceptionof issues and their acceptance of e-commerce

In the context of e-commerce, a variety of factors influence customer beliefs, attitudes, and intentions that affect trust-based relationships between consumers and vendors (Salam et al, 2015). For consumers' trust to be maintained, the technology powering online transactions must be reliable. Studying the

factors that contribute to increased trust in e-commerce platforms, as well as the function that trust plays in these platforms. (Soleimani, 2021).

H_0: There is no significant moderating effect of consumer trust on online purchase adoption and perceived risk.

8.1.5. Consumer protection plays a moderating influence in the relationship between consumer perception of risk and adoption of e-commerce.

Consumer protection measures may reduce perceived risk and increase trust in e-commerce. E-commerce platforms that offer strong consumer protection measures (such as clear policies on returns and refunds, secure payment systems, and easy-to-use dispute resolution processes) may be perceived as less risky and more trustworthy by consumers (Chawla & Kumar, 2022).

H_0: There is no significant moderating effect of consumer protection on online purchase adoption and perceived risk.

9.0 Research Methodology

This proposed research study shall be descriptive and analytical in nature. Data from both primary and secondary sources will be gathered to increase the study's reliability. The primary data will be gathered from the questionnaire using the proper sampling techniques, and the results will then be analysed using the proper statistical tools to get to a sound conclusion about the research.

9.1 Scope of the Study

This study's focus would be limited to consumers in Delhi (NCR). It is a metropolitan city in northern India, which is why it is chosen. According to "The Hindu Business Line" for 2021, Delhi is leading in online transactions in India. Therefore, the variance in responses from respondents from one distinct geographic area it is a metro area helps to collect the data that produces effective results for the findings needed for this research.

9.2 Sampling Design

Snowball sampling and purposive sampling will be used to target the respondents using the questionnaire distribution, as the respondents chosen will be able to provide specific knowledge about the topic of study. Purposive sampling and snowball sampling are acceptable based on the context and goals of the study. Purposive sampling enables researchers to focus on particular features or skills

pertinent to the research subject, whereas snowball sampling is appropriate for accessing hidden populations and creating various opinions.

9.3 Source of data collection

Both primary and secondary methods of data collection will be used.

9.3.1 Primary data

Primary data enables customisation and uniqueness to the current study. The researcher gathers primary data directly from sources, allowing for customisation and direct relation to the research aims.

Researchers can get information that is directly related to their particular research aims by using primary data gathering. It offers the chance to modify data-gathering procedures and tools to address the particular study issues, variables, or hypotheses being examined.

Questionnaires will be the tools used for the primary data. Respondents will be given a structured questionnaire for simultaneous data. The consumers using e-commerce as a means of online shopping, and online transactions will receive the questionnaire both offline and online.

9.3.2 Secondary Data

Secondary data is readily available and eliminates the need for researchers to collect data from scratch. It saves time and resources. For the collection of secondary data, information will be gathered from a variety of periodicals, newspapers, websites, libraries, books, journals, blogs, and other published and unpublished sources.

9.4 Statistical tools

The research data of the proposed study shall be analysed using statistical tools such as descriptive analysis, correlation analysis, ANOVA (analysis of variance), Independent T-test, Multiple regression analysis, CFA (Confirmatory factor analysis) and SEM (Structural equation model), reliability, validity, etc to test the hypothesized associations. to test the hypothesized associations. Combining these methods is justified since they offer a thorough evaluation of validity and reliability. By comparing means, ANOVA aids in examining internal consistency reliability, whereas CFA evaluates the measurementmodel's validity by examining the correlation between observed variables and underlying constructs. SEM takes the study one step further by integrating the structural links between components.

9.5 Sampling Techniques

The representative research sample from the population will be taken using the snowball sampling method and purposeful sampling in the study.

9.6 Sample Composition

Information from the study will be gathered from e-consumers who use the Internet for e-commerce transactions.

9.7 Sample Size

The population from which the sample is to be drawn is infinite in nature. Using a statistical method for sample size computation, the following are the many quantitative measures to be taken into account.

I. Population characteristics that can vary or the standard deviation

II. Desired level of confidence or Z value (taken as 1.96 for desired 95% confidence level)

III. The level of accuracy needed when calculating population characteristics (D).

$$n0 = \sigma 2.\ Z2\ /D2$$

Where, $n0$ = sample size

σ = Standard Deviation

Z = Standard normal variate for 95% confidence level and,D = Degree of precision desired

The outcomes of sample size from 3 situations are evaluated to acquire a representative and realistic sample size;

Scenario 1: Estimating a high standard deviation and low degree of precision.

Scenario 2: Estimating a moderate standard deviation and a moderate degree of precision.

Scenario 3: Estimating a low standard deviation and high precision.

Table 1: Comparative Analysis Taking Different Values of σ and D.

	σ	**Z**	**D**	**n_0**
Scenario 1	0.7	1.96	0.05	753
Scenario 2	0.6	1.96	0.06	384
Scenario 3	0.5	1.96	0.07	196
Total				1333
Average				444.33

The sample size calculated for the study is 444.33 with a 95% confidence level after taking the average of all three scenarios and considering them with varied values of σ and D.

10.0 The implications of the study

The study would provide valuable insights into the factors that influence perceived risk in the online marketplace and how these factors may impact their decision-making and behaviour. It would also identify strategies for reducing perceived risk and promoting trust and consumer protection in e-commerce, which could help to increase consumer confidence and encourage more people to use e-commerce. The study could also have implications for policymakers and regulators, as they could help to inform the development of laws and regulations related to trust and consumer protection e-commerce. This could include the development of new laws and regulations or strengthening existing ones to.0 better protect consumers and promote trust in online marketplaces.

11.0 Proposed Chapterization

The structure of the proposed research will be as follows:Chapter 1: Introduction

Chapter 2: Review of Literature Chapter 3: Research Methodology

Chapter 4: Analysis, findings and Results

Chapter 5: Conclusion and Directions for Future Research

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Appendix

Literature Review Synthesized Matrix

S.no.	Authors	Security Risk	Privacy Risk	Financial Risk	Awareness	Consumer Trust	Consumer Protection	E-commerce
1.	A, (2019)							✓
2.	Alemany et al, (2019)		✓					
3.	Adgulwar, (2021)						✓	✓
4.	Arora et al, (2014)				✓			
5.	Balchandran, (2018)						✓	
6.	Bhatti et al, (2018)					✓		
7.	Bolton & Katok, (2004)					✓		
8.	Chatterjee, (2015)		✓					
9.	Chaudhary, (2017)				✓			
10.	Chawla & Kumar,(2021)					✓	✓	
11.	Gupta & Dubey, (2016)	✓						
12.	Gurung & Raja, (2016)	✓						
13.	Iyer & Moorthy, (2015)			✓				
14.	Kachare et al, (2012)				✓			
15.	Kaur, (2015)		✓					
16.	M & Chahar, (2013)	✓						
17.	Mahajan, (2018)	✓						
18.	Mahmoud, (2019)							✓
19.	Makanyeza et al, (2021)				✓			
20.	Masoud, (2013)	✓						
21.	Minhas, (2019)						✓	
22.	Muneer et al, (2018)		✓					
23.	Nawi et al, (2019)			✓				

24.	Pandit, (2020)						✓	
25.	Salamat & Elian, (2021)							✓
26.	Shaik & Poojasree, (2020)						✓	
27.	Sharma & kurien, (2017)				✓			
28.	Singh & Grewal, (2013)						✓	
29.	Solanki, (2019)				✓			
30.	Velentzas et al, (2012)					✓		
31.	Yakoob, (1998)						✓	